

## Effect of using WHO surgical safety checklist in post-operative mortality and complications prevalence

### Abstract

**Objective:** Surgery has become an integral part of global health care, with an estimated 234 million operations performed yearly.

Although surgical care can prevent loss of life or limb, it is also associated with a considerable risk of mortality and morbidity. In 2010, in a study which was performed in Ardabil, basic information about mortality and complications due to surgery were founded. The goal of this study was to investigate these rates after using WHO surgical safety check list and then comparing these two studies were recruited.

**Methods:** In this study 1000 patients above 16 years old who went under non-cardiac surgeries in Ardabil Fatemi Hospital and WHO designated check list was filled by operation team of each patient. Post-operation mortality and complications were followed in a 30-day period after surgery, data were recorded by special forms which were designed for this goal.

**Results:** Among the 1000 patients studied, 452 patients (45.2%) were male, and mean age was  $38.67 \pm 16.66$ .

The number of mortalities from 10 (1%) in previous study decreased to 7 (0.7%) in this study. Surgery site infection from 34 cases (3.4%) in previous study decreased to 21 cases (2.1%) in this study and unplanned return to the operating room from 12 cases (1.2%) decreased to 5 cases (0.5%). In the both study 3 cases (0.3%) developed post-operative acute renal failure. The number of DVT from 25 (2.5%) in previous study decreased to 16 (1.6%) in this study. Transfusion during operation from 11 (1.1%) in previous study increased to 15 (1.5%) in this study and transfusion in 72 hour period after operation from 50 (5%) in previous study decreased to 34 (3.4%) in this study.

**Conclusion:** Generally mortality and morbidity were decreased by using WHO surgical safety checklist. This decreased about observation at least one of the complications was significant, about unplanned return to the operating room and surgery site infection and transfusion in 72 hour period after operation were borderline and about mortality, acute renal failure and DVT were not significant. It can be due to the high frequency of emergency surgery in this study as compared with previous study.

**Key words:** Post-operative death, Post-operative complications, WHO surgical safety check list